Conclusion

The preceding case studies aimed to analyze long-standing sustainable use projects in an effort to identify factors that enhanced sustainability under particular sets of conditions. The projects were selected because they had all been implemented for several years and there were substantial data available to assess the different use regimes involved. Following preparation of the case studies, a workshop was held in March 2000 in Norway, to compare the results and distill common patterns and lessons. It was expected that employing the Analytic Framework contained in Annex 1 throughout the case studies would facilitate the synthesis process of the workshop, as this tool would provide a consistent analytic approach and orientation.

Indeed, several overarching lessons were identified:

1. Sustainability of uses of renewable natural resources is dependent on the existence of a 'sustainable society' at the local, national and global levels.

2. Successful biological conservation is a function of equity and democracy.

3. To achieve greater sustainability of uses of natural resources will likely require modification of the roles of organizations and government agencies in authority.

4. The current conservation paradigm of Protected Areas (including as applied to the 'biodiversity hotspots' concept) may not be economically viable in many developing countries, simply because the opportunity costs often exceed the value local people receive from their existence. National and international agencies and organizations realize most of the value from designation of protected areas and 'hotspots'.

5. It is not possible to transpose directly the combination of factors that influence one case to another site, and expect the same impact or result.

6. Donor agencies and/or central government policies need to consider management requirements beyond project cycles in order to promote long-term sustainability of resource uses.

7. External factors such as war and natural disasters can have an over-riding influence on the sustainability of resource use.

8. Interventions on key resources by external institutions often pressure transformation of local governance systems. The impact of these changes is often overlooked.

More specific observations of common features can be grouped in four categories: Lessons related to policy, social processes, institutions, and information.

Related to Policy

1. Devolution of authority for management of renewable natural resources to local people/communities can be very effective at achieving conservation and development objectives. In relation to the case studies, the devolution of authority can also promote good governance at the local level. However, when governments decentralize administrative responsibilities without the devolution of authority the positive outcomes noted are unlikely to be achieved.

2. Conflicts arose when the local users' rights were not clearly articulated in government law or regulations. A particularly problematic outcome is when rights are granted to individuals who are not in any way associated with the day-to-day care/conservation/management of the resource.

3. Resource users must be able to exclude other prospective users of the renewable natural resource. The lack of such rights threatens sustainability of the use of the resource and the overall conservation status of the species being used.

4. Use, and the process of the use, of renewable natural resources has a comparative advantage when the value realized by the manager exceeds the costs of management. If such a comparative advantage does not exist, then it is highly unlikely that the use will be sustainable. For example, it was hypothesized that this lack of comparative advantage in ecological terms, leads to failure of many livestock management projects in developing countries. It is important to assess whether there is a comparative advantage before initiating a use-based project.

5. Social empowerment is one important development value that is realized when local people are granted authority to manage renewable natural resources.

Related to Social Processes

6. In each case, success could be attributed to a few individuals who triggered positive change within the communities and continued to work to maintain the new *modus operandi*. To achieve long-term changes in the way the communities managed renewable natural resources often required coalitions of scientists, local and international non-governmental organizations (NGOs) and many other interested individuals to initiate the processes in the community and to facilitate provision of needed technical support and capacity building. Such coalitions nurtured local community leadership that promoted the changes from within the communities. Finally, it apparently is not important when and where this leadership asserts itself in the process (contextual), but in every case study such leaders could be identified as being critical to the success at many different scales/levels and at different times.

7. Societies are not static but rather in a process of evolution. As a consequence in the context of community-based management of natural resources one cannot assume that resource choice will ensure equity. However, a very good approach to explore the concept would be to begin by selecting an 'equitable' resource that is available to, and valued by, all in the community.

8. As the share of benefits (financial, and other types of benefit) captured by local 'resource' holders is devolved, local people may manage resources more responsibly, effectively, and sustainably. It was clear from the case studies that there were major changes in benefits realized by the local people over time. Further, in most cases there were also international benefits, some of which were being realized by the NGOs involved.

9. The concept of conservation of biodiversity should be introduced gradually to local communities as rural people have little knowledge of the concept as promoted by the international community.

Related to Institutions

10. Proper management of institutional change accelerates progress in achieving sustainable use of renewable natural resources. Such management should consider the mix of leadership that is appropriate, have clear goals, and be based on credible knowledge of how to get things done. The management process can serve as the mechanism to bring all the actors together to monitor and adapt human interventions to promote sustainability.

11. A local conservation scheme can create a framework (or forum) for pursuit of economic objectives while serving as a good model for local people to learn about democratic processes.

12. Successful sustainable use of renewable natural resources depends heavily on village organization and the relationship between the community and the natural resources that are being used/managed.

13. Local empowerment is most likely to be achieved when the stakeholders operate with mutual trust, transparency and ensure equity in all transactions with the local communities.

14. Village committees should have legal status and linkages should be reinforced between them and national focal points for international conventions such as the CBD, CITES, Convention on Migratory Species, or Ramsar.

15. Every effort should be made to avoid erecting donor-dependent institutions in the communities.

16. In some of the case studies, local social systems had been destroyed, and there was need for them to be re-built or developed to be more effective at responding to much greater pressures they face today.

17. Care should be taken to avoid destroying local social systems in pursuit of technically accurate fixes.

Related to Information

18. In each case there was a recognized need to build on both local user and external technical knowledge. It was also important that the knowledge (local and external) address both the resource management/ecological needs and the societal needs of the local communities.

19. Knowledge, information, learning, and development of information management systems should parallel devolution of authority over the management of resources. This was best achieved if local managers controlled the process and outsiders were limited to a facilitating role and to providing the services for which they were asked.

This set of case studies is provided as the first offering in an expanding series. It is clear that more contributions are needed to understand precisely under what conditions these preliminary lessons apply, and also to draw-out additional observations related to some of the topics that were not emphasized in this series. There is need both to sharpen and refine the lessons already identified, as well as to broaden the range of issues covered.

For example, the majority of these cases deal with community-based management systems. It would be interesting to examine scenarios that involve different levels and types of stakeholders and institutions such as government-private sector partnerships, or profit-making companies. It might also be useful to examine whether the same lessons hold in community-based projects involving similar resources, but carried out in different regions.

Because the case studies dealt primarily with village-level interactions, the policy dimension of the discussion related mainly to questions of devolution and authority. In the synthesis workshop, issues such as the effects of economic policy interventions and incentives were underemphasized. Perhaps forthcoming case studies and comparative work could examine this crucial policy dimension systematically.

The limitations of this volume notwithstanding, the detailed case studies provide a variety of insights that will be of value to scholars, policy-makers and managers who are interested what it takes to promote sustainability in uses of wild renewable resources. The 'lessons' gleaned from these cases in some instances challenge the efficacy of some current thinking in conservation (*e.g.*, the role of protected areas) while in other cases they reinforce prevailing thought (*e.g.*, participatory methods and equitable sharing of benefits). Nevertheless, because the cases document management systems in such diverse regions and cultures as indigenous peoples in Argentina to communities managing protected areas and natural resources in West, East, Southern Africa and Central Asia, the applicability of the lessons may have some global relevance. The experience gained in assessing these cases supports the need for further assessments of long-term resource management activities in different regions, especially in relation to management of ecologically comparable species in different regions and comparison of management and use of single species versus ecosystems.